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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/924,054	08/08/2001	Hiroyuki Saito	00-240546	6171

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EXAMINER	
SHEW, JOHN	

ART UNIT	PAPER NUMBER
2664	

DATE MAILED: 06/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/924,054	SAITO, HIROYUKI	
	Examiner	Art Unit	
	John L. Shew	2664	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *8/8/2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☐ Claim(s) _____ is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,5,6,9,10,13,14* is/are rejected.

7)☒ Claim(s) *3,4,7,8,11,12,15 and 16* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *08 August 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *08082001*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:

Page 2 line 8 cites "n1 to n7" should be "n1 to n6".

Page 3 line 18 cites "<n2, n7>" should be "<n3, n6>" to correspond to p1.

Page 3 line 18 cites "<n2, n6>" should be "<n1, n5>" to correspond to p2.

Page 3 line 18 cites "<n1, n7>" should be "<n1, n6>" to correspond to p3.

Page 3 line 19 cites "<n1, n6>" should be "<n1, n5>" to correspond to p4.

Page 16 line 23 cites "n1 to n7" should be "n1 to n6".

Appropriate correction is required.

Claim Objections

2. Claim 7 is objected to because of the following informalities:

Claim 7 line 9 cites "data ng" should be "data inflowing" .

Claim 7 line 10 cites "per-ser" should be "per-user".

Claim 11 line 13 cites "per-ser" should be "per-user".

Claim 15 line 11 cites "data lowing" should be "data inflowing".

Claim 15 line 13 cites "per-ser" should be "per-user".

Appropriate correction is required.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 5, 6, 9, 10 are rejected under 35 U.S.C. 102(e) as being anticipated by Benmohamed et al. (Patent number 6795399).

Claim 1, Benmohamed teaches a communication network designing circuit for multiple point communication service (Abstract lines 1-8) referenced by the apparatus for designing IP networks for optimistic link capacity requirements, for permitting arbitrary

communication within a predetermined range (column 2 lines 5-10) referenced by the upper and lower link capacity bounds, by providing a traffic amount of data inflowing from an ingress node through which data flow in from other network (FIG. 5, column 14 lines 13-25) referenced by the input VPN demands for a given link Step 502, and a traffic amount of data flowing out from an egress node through which data is fed to other network (FIG. 5, column 14 lines 25-33) referenced by the output link capacity C_l^{WFQ} for link l of all VPN demands routed through link l Step 508, in an object network consisted of a plurality of nodes and connected to other network (column 4 lines 21-31) referenced by V the set of nodes corresponding to points of presence, comprising setting means for setting a mathematical programming problem for deriving said multiple point communication service (FIG. 1, FIG. 2, column 5 lines 12-23, column 7 lines 30-35) referenced by the Worst-Case Link Capacity Requirements Processor 14 which sets the input link requirements and the optimization based on equation (5), and optimization means for solving the mathematical programming problem set by said setting means (FIG. 1, FIG.2, column 5 lines 23-29) referenced by the Network Topology Optimization Processor 18 calculating the network cost to obtain the final network design, and obtaining a path for said multiple point communication service (FIG. 2, column 5 lines 28-33) referenced by the resulting route of each traffic flow f_i.

Claim 2, Benmohamed teaches said path for said multiple point communication service is derived on the basis of preliminarily set optimization standard (column 4 lines 21-45) referenced by the input to the IP network design system the IP flow demand specified

by f_i given as a 6-tuple $f_i=(s_i, t_i, a_i, n_i, d_i, r_i)$ where s_i and t_i are the source and destination nodes for the path and f_i as the input standard.

Claim 5, Benmohamed teaches a communication network designing method for multiple point communication service (Abstract lines 1-8) referenced by the method for designing IP networks for optimistic link capacity requirements, for permitting arbitrary communication within a predetermined range (column 2 lines 5-10) referenced by the upper and lower link capacity bounds, by providing a traffic amount of data inflowing from an ingress node through which data flow in from other network (FIG. 5, column 14 lines 13-25) referenced by the input VPN demands for a given link Step 502, and a traffic amount of data flowing out from an egress node through which data is fed to other network (FIG. 5, column 14 lines 25-33) referenced by the output link capacity C_l^{WFQ} for link l of all VPN demands routed through link l Step 508, in an object network consisted of a plurality of nodes and connected to other network (column 4 lines 21-31) referenced by V the set of nodes corresponding to points of presence, comprising setting step of setting a mathematical programming problem for deriving said multiple point communication service (FIG. 2, column 5 lines 12-23, FIG. 3, column 12 lines 38-53) referenced by the input of point-to-point VPN demands and computation of worst-case line capacity Step 304, and optimizing step of solving the mathematical programming problem set in said setting step (FIG. 1, FIG.2, column 5 lines 23-29) referenced by Computation Capacity of Each Link Step 204 by Optimization Processor

18, and obtaining a path for said multiple point communication service (FIG. 2, column 5 lines 28-33) referenced by the resulting route of each traffic flow f_i.

Claim 6, Benmohamed teaches said path for said multiple point communication service is derived on the basis of preliminarily set optimization standard (column 4 lines 21-45) referenced by the input to the IP network design system the IP flow demand specified by f_i given as a 6-tuple $f_i=(s_i, t_i, a_i, n_i, d_i, r_i)$ where s_i and t_i are the source and destination nodes for the path and f_i as the input standard.

Claim 9, Benmohamed teaches a storage medium storing a communication network design control program (column 3 lines 20-40) referenced by the CPU RAM and software instructions to perform the methodology, for designing a communication network for multiple point communication service (Abstract lines 1-8) referenced by the method for designing IP networks for optimistic link capacity requirements, for permitting arbitrary communication within a predetermined range (column 2 lines 5-10) referenced by the upper and lower link capacity bounds, by providing a traffic amount of data inflowing from an ingress node through which data flow in from other network (FIG. 5, column 14 lines 13-25) referenced by the input VPN demands for a given link Step 502, and a traffic amount of data flowing out from an egress node through which data is fed to other network (FIG. 5, column 14 lines 25-33) referenced by the output link capacity C_l^{WFQ} for link l of all VPN demands routed through link l Step 508, in an object network consisted of a plurality of nodes and connected to other network (column 4 lines 21-31)

referenced by V the set of nodes corresponding to points of presence, said communication network design control program comprising setting step of operating a computer for setting a mathematical programming problem for deriving said multiple point communication service (FIG. 2, column 5 lines 12-23, FIG. 3, column 12 lines 38-53) referenced by the input of point-to-point VPN demands and computation of worst-case line capacity Step 304, and optimizing step of operating said computer for solving the mathematical programming problem set in said setting step (FIG. 1, FIG.2, column 5 lines 23-29) referenced by Computation Capacity of Each Link Step 204 by Optimization Processor 18, and obtaining a path for said multiple point communication service (FIG. 2, column 5 lines 28-33) referenced by the resulting route of each traffic flow f_i.

Claim 10, Benmohamed teaches said communication network design control program operates said computer for deriving said path for said multiple point communication service on the basis of preliminarily set optimization standard (column 4 lines 21-45) referenced by the input to the IP network design system the IP flow demand specified by f_i given as a 6-tuple $f_i=(s_i, t_i, a_i, n_i, d_i, r_i)$ where s_i and t_i are the source and destination nodes for the path and f_i as the input standard.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 13, 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Benmohamed as applied to claims 1, 2, 5, 6, 9, 10 above, in view of Debey (Patent number 6519693).

Claim 13, Benmohamed teaches a communication network design control program (column 3 lines 20-40) referenced by the CPU RAM and software instructions to perform the methodology, for designing a communication network for multiple point communication service (Abstract lines 1-8) referenced by the method for designing IP networks for optimistic link capacity requirements, for permitting arbitrary communication within a predetermined range (column 2 lines 5-10) referenced by the upper and lower link capacity bounds, by providing a traffic amount of data inflowing from an ingress node through which data flow in from other network (FIG. 5, column 14 lines 13-25) referenced by the input VPN demands for a given link Step 502, and a traffic amount of data flowing out from an egress node through which data is fed to other network (FIG. 5, column 14 lines 25-33) referenced by the output link capacity C_l^{WFQ} for link l of all VPN demands routed through link l Step 508, in an object network consisted of a plurality of nodes and connected to other network (column 4 lines 21-31) referenced by V the set of nodes corresponding to points of presence, said

communication network design control program comprising setting step of operating a computer for setting a mathematical programming problem for deriving said multiple point communication service (FIG. 2, column 5 lines 12-23, FIG. 3, column 12 lines 38-53) referenced by the input of point-to-point VPN demands and computation of worst-case line capacity Step 304, and optimizing step of operating said computer for solving the mathematical programming problem set in said setting step (FIG. 1, FIG.2, column 5 lines 23-29) referenced by Computation Capacity of Each Link Step 204 by Optimization Processor 18, and obtaining a path for said multiple point communication service (FIG. 2, column 5 lines 28-33) referenced by the resulting route of each traffic flow f_i.

Benmohamed does not teach a transmission medium transmitting a communication program.

Debey teaches a transmission medium transmitting a communication program (FIG.2, column 2 lines 40-46, column 3 lines 46-48) referenced by the CATV network for program transmission.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to transmit the network design program of Benmohamed over an information network as suggested by Debey for the purpose of increasing greater accessibility to information required to be accessed by more than one person at the same time (Debey column 1 lines 33-40).

Claim 14, Benmohamed teaches said communication network design control program operates said computer for deriving said path for said multiple point communication

service is derived on the basis of preliminarily set optimization standard (column 4 lines 21-45) referenced by the input to the IP network design system the IP flow demand specified by f_i given as a 6-tuple $f_i=(s_i, t_i, a_i, n_i, d_i, r_i)$ where s_i and t_i are the source and destination nodes for the path and f_i as the input standard.

Allowable Subject Matter

3. Claims 3, 4, 7, 8, 11, 12, 15, 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Citation of Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Patent number 6205117, Doshi et al. discloses a distributed precomputation of network signal paths with table-based link capacity control.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John L. Shew whose telephone number is 571-272-3137. The examiner can normally be reached on 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on 571-272-3134. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

js

WELLINGTON CHIN
SUPERVISORY PATENT EXAMINER